

DEPARTMENT OF FISH AND GAME

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Steve Ritchie, Acting Executive Director
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
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January 10, 2000

**Subject: Amendment Request to USBR Cooperative Agreement No. 99FC200241;
CALFED Directed Action #99-B06—*An Assessment of Ecological and Human Health
Impacts of Mercury in the Bay-Delta Watershed.***

Dear Sir,

This letter is to request an augment in funding for the CALFED grant entitled "*An Assessment of Ecological and Human Health Impacts of Mercury in the Bay-Delta Watershed*". Mercury has been designated a contaminant of concern in the CALFED water quality common program because of its presence at elevated concentrations in long-lived game fish in the Central Valley and in the Bay-Delta Estuary. These concentrations have resulted in the posting of human health advisories recommending limited or no consumption of selected size classes of sportfish. The fish tissue concentrations may also represent a hazard to piscivorous wildlife. Concern has been expressed that a number of anthropogenic activities in the basin, including some of those of CALFED, may act to increase the bioaccumulation of mercury in the estuarine food chain and to exacerbate the public health and potential wildlife problem. CALFED awarded a grant to a consortium of governmental agencies and university experts to develop a better understanding of mercury cycling in the Central Valley and Estuary and to recommend management options to CALFED and to regulatory agencies for the control of mercury.

In August a panel of international mercury experts was assembled to critique the proposed study plan. Curricula Vitae are available upon request for the external Scientific Review Committee experts. The consensus of the experts was that all the proposed work was essential but that a number of tasks needed to be expanded considerably and others added if the study was to accomplish its intended goal. A summary of the Science Review Committee's recommendations for improving the study are included as Attachment One.

The CALFED mercury investigators met several times and developed the attached set of proposals (Attachment Two) to address the Science Review Committee's key recommendations. Because of the large amount of money involved, the proposed additional work was prioritized as "*Critically Needed*", "*Highly Recommended*" and "*Worthwhile*" for achieving the projects goals. The *Critically Needed* category includes augmentation requests for additional QA/QC, modeling and increased project

management (Table 1). The cost to fully fund this category is \$412,788 (11% of the original budget). The *Highly Recommended* category includes a request for additional funding for more individual fish tissue contamination work, sediment studies of historical mercury deposition, oxygen and sulfide concentrations, and speciation, diagenesis and bioavailability of mercury from mine tailing (Table 2). The requested funding here is \$290,458 (8% of the original budget). Finally, the *Worthwhile* category included significantly more work in each of the high priority categories mentioned above and also studies of atmospheric deposition of mercury, diurnal variation in methyl mercury concentrations in water, and studies of mercury speciation and mineralogy of the bed and suspended sediments transported away from mine sites (Table 3). Funding needed here is \$763,734 (20% of the original budget). Specific costs detailing this information are shown within the proposals themselves (Attachment Two).

In summary, an internationally recognized panel of mercury experts was convened as required by the CALFED grant to review the proposed study plan. The consensus of the experts was that the basic study design was good but that additional work was needed in several key areas. Proposals are included to accomplish this work. Please call either Mark Stephenson (831-633-0253) or Chris Foe (916-255-3113) if you have questions.

Sincerely,

Mark Stephenson

Mark Stephenson,
Project Manager

Chris Foe

Chris Foe, Ph.D.
Project Investigator

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